

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 11717PCT dp:kb	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/AU2003/001406	International Filing Date (day/month/year) 22 October 2003	Priority Date (day/month/year) 23 October 2002
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ B44D 3/00, B08B 3/02		
Applicant DOMINEY, Peter, John		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet

- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheet(s).

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 24 May 2004	Date of completion of the report 6 December 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer M.S. HAYNES Telephone No. (02) 6283 2170

1. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed.
- ☒ the description, pages 1, 4-7 as originally filed,
pages . filed with the demand,
pages 2-3, received on 17 November 2004 with the letter of 17 November 2004
- ☒ the claims, pages . as originally filed,
pages . as amended (together with any statement) under Article 19,
pages . filed with the demand,
pages 8-9, received on 17 November 2004 with the letter of 17 November 2004
- ☒ the drawings, pages 1-4, as originally filed,
pages . filed with the demand,
pages . received on with the letter of
- ☐ the sequence listing part of the description:
pages . as originally filed
pages . filed with the demand
pages . received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 1-9	YES
	Claims	NO
Inventive step (IS)	Claims 1-9	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-9	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)**NOVELTY (N) AND INVENTIVE STEP (IS)**

The invention defined by the amended claims is a paint roller cleaner which comprises two parts, the first part is an outer flange so that excess paint is scraped from the paint roller and the second part is a cylindrical housing which offers a very close fit to the inserted paint roller. A cleaning fluid is then applied to the housing in order to clean the paint roller.

No individual citation or obvious combination of citations disclose this arrangement.

The closest art is US 4386702A which discloses an annular ring which includes an external flange but does not disclose a cylindrical housing. Also US 4765354 A discloses a cylindrical housing but no external flange. It also does not mention that the paint roller is a close fit within the cylindrical housing.

Claims 1-9 therefore meet the criteria set forth in PCT Article 33(2) with regard to novelty and PCT Article 33(3) for inventive step.

Paint roller cleaners are known from the prior art in various forms. The inventor of the present invention has identified a number of difficulties with known prior art forms of cleaners. In some instances large volumes of water are used in the cleaning process thereby creating a problem related to the disposal of the contaminated water. In other
5 prior art systems water is used to clean significant quantities of paint from a roller. This situation leads to both the disposal problems noted above and is, of course, also very wasteful of paint.

A further significant difficulty associated with known paint roller cleaning assemblies occurs as a result of the necessity of handling a paint roller charged with paint to be
10 cleaned. In many cases, in order to secure a paint roller in a cleaning apparatus the paint roller has to be separated from its handle, or at least, the operator will need to grasp the roller in a way that makes close contact between the operator and paint charged roller inevitable. The operator's hands thus become significantly affected by paint contamination and therefore need cleaning as well.

15 The present invention addresses itself to the above situation and presents an alternative to prior art paint roller cleaners.

SUMMARY OF THE INVENTION

Therefore, according to a first aspect of the present invention, there is provided a paint roller cleaner including

- 20 - a cylindrical housing having an opening adapted to receive a paint roller, said opening having associated therewith an outer flange portion for removing paint from said paint roller, and said cylindrical housing being a very close fit around said paint roller for removing further paint therefrom, said removal of paint constituting a first cleaning action on said paint roller; and
- 25 - external locking means for securing said paint roller in said cylindrical housing, said external locking means attaching to a handle of said paint roller whereby said paint roller is restrained from movement relative to the housing by the locking means; and whereby cleaning fluid is introduced into the housing under to thereby effect a second cleaning action on said paint roller.

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ART 34 AMDP

The paint roller cleaner of the invention is thereby secured in the cleaner housing by using the locking means to secure the roller handle to the housing. The locking preferably also serves to maintain the position of the roller with respect to the housing. Many prior art cleaner devices rely on the use of a tangential stream of water or cleaning fluid to cause a rotation in the roller which then sheds entrained water through centrifugal action. In the case of the present invention the paint roller is not required to move and the second cleaning action occurs under pressure of fluid in the housing.

In a further form of the invention the position locking means includes a hook member designed to lock around and restrain a handle of a paint roller thereby securing the roller with respect to the cleaner for use. There is thus no requirement to remove the handle from the device to complete the cleaning operation.

In preference, the locking means is preferably located close to the opening of the housing in which the paint roller is received, thereby ensuring that all of the roller is received in the housing.

Preferably, the locking means is a hook that is upstanding from an outer surface of the housing and generally in line axially therewith said walls curving around to join one another thereby forming the hook end portion.

Conveniently, the locking means is a snap fit locking means.

Preferably the flange is positioned perpendicular to the axis of the housing.

More preferably, still an outer edge of the flange has a semi-circular indent serving as a scraper that may be used to remove excess paint held in a roller before the roller is inserted into the housing.

Preferably, said cleaner further includes a pressure relief means. The pressure relief means may take the form of a plug with a vent opening closed by a plug, said plug being able to be released by pressure within the housing.

DESCRIPTION OF DRAWINGS

REPLACED BY
ART 34 AMDT

CLAIMS

1. A paint roller cleaner characterized in that it includes
a cylindrical housing having an opening adapted to receive a paint roller, said
opening having associated therewith an outer flange portion for removing paint
5 from said paint roller, and said cylindrical housing being a very close fit around
said paint roller for removing further paint therefrom, said removal of paint
constituting a first cleaning action on said paint roller, and
external locking means for securing said paint roller in said cylindrical housing,
said external locking means attaching to a handle of said paint roller whereby
10 said paint roller is restrained from movement relative to the housing by the
locking means; and whereby cleaning fluid is introduced into the housing under
pressure to thereby effect a second cleaning action on said paint roller.
2. A paint roller cleaner according to claim 1, characterized in that the locking
means includes a hook member designed to lock around and restrain a handle
15 of a paint roller thereby securing the roller with respect to the cleaner for use.
3. A paint roller cleaner according to claim 1, characterized in that the locking
means is located close to the opening of the housing in which the paint roller is
received.
4. A paint roller cleaner according to claim 1, characterized in that the locking
20 means is a hook which is upstanding from an outer surface of the housing and
generally in line axially therewith, said walls curving around to join one another
thereby forming the hook end portion.
5. A paint roller cleaner according to claim 1, characterized in that the locking
means is a snap fit locking means.
- 25 6. A paint roller cleaner according to claim 1, characterized in that said flange is
positioned perpendicular to the axis of the housing.
7. A paint roller cleaner according to claim 1, characterized in that an outer edge of
the flange has a semi-circular indent serving as a scraper that may be used to
remove excess paint held in a roller before the roller is inserted into the housing.

REPLACED BY
ART 34 AMDT

8. A paint roller cleaner according to claim 1, characterized in that said cleaner further includes a pressure relief means.
9. A paint roller cleaner according to claim 8, characterized in that said pressure relief means includes a vent opening closed by a plug, said plug being able to be released by pressure within the housing.

Dated: 10/03/2005

Peter John Dominey

By his Patent Attorneys

LESICAR PERRIN

REPLACED BY
ART 34 AMDT

Our Reference 11717PCT dp kb

17 November 2004

Commissioner of Patents
WODEN ACT 2606

Sirs

Patent Cooperation Treaty Application No. PCT/AU03/01406
Paint Roller Cleaner
Peter John Dominey

We thank the Examiner for their first Written Opinion dated 9 July 2004, issued with respect to the above international application. In the Written Opinion, claims 1-11 were found to be novel but lacking in inventive step in the light of various prior art documents. We now respond as follows and enclose herewith a schedule of proposed amendments¹ for your convenience.

A problem associated with each of the paint roller cleaners of the cited prior art is that not enough paint is scraped off the nap of the roller cleaner prior to the application of water. As a result, excessive amounts of water are required and only a small amount of paint is salvaged. In our submission, even when documents such as US 4,765,354 and US 6,280,531 are combined so as to incorporate a means of scraping paint with a means of applying water pressure, this problem is still not alleviated. We submit that this problem may only be alleviated by using the paint roller cleaner of the present invention, and that inventive step objections should therefore be removed.

The present invention involves two cleaning actions prior to the application of water. The paint roller 24 is adapted to be firstly scraped along the indent 26 of the outlet flange 22 to perform an initial removal of paint, and then inserted within the housing 12 which is of a diameter very close to that of the paint roller 24 so that a further removal of paint occurs. As a result of this first cleaning action, more paint is salvaged. Finally, when pressurised water is applied, most of the paint entrained on the nap of the roller has already been removed and thus excessive amounts of water are not required.

US 4,765,354 and US 6,079,429 disclose paint roller cleaners involving a similar housing adapted to be connected to a water supply. In the descriptions of these patents there is no mention that the insertion of the paint roller cleaner aids in removing paint from the nap of the roller. This would indicate that the housing of each device is of a diameter that is larger than the diameter of the paint roller. US 6,079,429 uses the words 'minimum

clearance' to describe the difference in diameters, this clearly indicating that there would be no pressure placed on the paint roller during insertion.

In the amended pages² enclosed, claims 3 and 7 have now been incorporated into the new claim 1 which has also been reworded in order to clarify the means by which the paint roller cleaner of the present invention achieves the abovementioned first and second cleaning actions. We have also replaced the word 'scraper' with 'scraper' in what is now claim 7.

In the light of these amendments and the above response, we respectfully request favourable reconsideration of the present application.

Yours sincerely
LESICAR PERRIN

DOREEN PERRIN
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¹ Schedule of proposed amendments

² Amended pages

Paint roller cleaners are known from the prior art in various forms. The inventor of the present invention has identified a number of difficulties with known prior art forms of cleaners. In some instances large volumes of water are used in the cleaning process thereby creating a problem related to the disposal of the contaminated water. In other
5 prior art systems water is used to clean significant quantities of paint from a roller. This situation leads to both the disposal problems noted above and is, of course also very wasteful of paint

A further significant difficulty associated with known paint roller cleaning assemblies occurs as a result of the necessity of handling a paint roller charged with paint to be
10 cleaned. In many cases, in order to secure a paint roller in a cleaning apparatus the paint roller has to be separated from its handle, or at least, the operator will need to grasp the roller in a way that makes close contact between the operator and paint charged roller inevitable. The operator's hands thus become significantly affected by paint contamination and therefore need cleaning as well.

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SUMMARY OF THE INVENTION

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20 a cylindrical housing having an opening adapted to receive a paint roller, said opening having associated therewith an outer flange portion for removing paint from said paint roller, and said cylindrical housing being a very close fit around said paint roller for removing further paint therefrom, said removal of paint constituting a first cleaning action on said paint roller; and
25 external locking means for securing said paint roller in said cylindrical housing, said external locking means attaching to a handle of said paint roller whereby said paint roller is restrained from movement relative to the housing by the locking means, and whereby cleaning fluid is introduced into the housing under pressure to thereby effect a second cleaning action on said paint roller.

30 The paint roller cleaner of the invention is thereby secured in the cleaner housing by using the locking means to secure the roller handle to the housing. The locking

preferably also serves to maintain the position of the roller with respect to the housing. Many prior art cleaner devices rely on the use of a tangential stream of water or cleaning fluid to cause a rotation in the roller which then sheds entrained water through centrifugal action. In the case of the present invention the paint roller is not required to
5 move and the second cleaning action occurs under pressure of fluid in the housing.

In a further form of the invention the position locking means includes a hook member designed to lock around and restrain a handle of a paint roller thereby securing the roller with respect to the cleaner for use. There is thus no requirement to remove the handle from the device to complete the cleaning operation.

10 In preference, the locking means is preferably located close to the opening of the housing in which the paint roller is received, thereby ensuring that all of the roller is received in the housing.

Preferably, the locking means is a hook is upstanding from an outer surface of the housing and generally in line axially therewith said walls curving around to join one
15 another thereby forming the hook end portion

Conveniently, the locking means is a snap fit locking means.

Preferably, the flange is positioned perpendicular to the axis of the housing.

More preferably, still an outer edge of the flange has a semi-circular indent serving as a scrapper that may be used to remove excess paint held in a roller before the roller is
20 inserted into the housing.

Preferably, said cleaner further includes a pressure relief means. The pressure relief means may take the form of a plug with a vent opening closed by a plug, said plug being able to be released by pressure within the housing.

CLAIMS

1. A paint roller cleaner characterized in that it includes:
a cylindrical housing having an opening adapted to receive a paint roller, said
opening having associated therewith an outer flange portion for removing paint
5 from said paint roller, and said cylindrical housing being a very close fit around
said paint roller for removing further paint therefrom, said removal of paint
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4. A paint roller cleaner according to claim 1, characterized in that the locking
20 means is a hook which is upstanding from an outer surface of the housing and
generally in line axially therewith said walls curving around to join one another
thereby forming the hook end portion.
5. A paint roller cleaner according to claim 1, characterized in that the locking
means is a snap fit locking means.
- 25 6. A paint roller cleaner according to claim 1, characterized in that said flange is
positioned perpendicular to the axis of the housing.
7. A paint roller cleaner according to claim 1, characterized in that an outer edge of
the flange has a semi-circular indent serving as a scraper that may be used to
remove excess paint held in a roller before the roller is inserted into the housing.

8. A paint roller cleaner according to claim 1, characterized in that said cleaner further includes a pressure relief means
9. A paint roller cleaner according to claim 8, characterized in that said pressure relief means includes a vent opening closed by a plug, said plug being able to be released by pressure within the housing.

5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2003/001406

A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl. ⁷ : B44D 3/00, B08B 3/02												
According to International Patent Classification (IPC) or to both national classification and IPC												
B. FIELDS SEARCHED												
Minimum documentation searched (classification system followed by classification symbols)												
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched												
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI IPC: B08B, B05C 17, B44D 3/00, A46B 17 & Keywords PAINT, ROLLER, CLEAN, WASH, RINS, BATH												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
Y	US 4836702 A (ALLEN) 6 June 1989 see abstract & figures	1-11										
Y	US 6280531 B1 (GALBREATH) 28 August 2001 see abstract & figures	1-11										
Y	US 4765354 A (THATCHER et al) 23 August 1988 see entire specification	1-11										
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex												
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention											
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone											
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art											
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family											
"P" document published prior to the international filing date but later than the priority date claimed												
Date of the actual completion of the international search 22 January 2004		Date of mailing of the international search report 23 JAN 2004										
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer M.S. HAYNES Telephone No : (02) 6283 2170										

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2003/001406

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 93/24337 A (WARD) 9 December 1993 see abstract	1-11
Y	GB 2311210 A (AKEN) 24 September 1997 see abstract	1-11
Y	GB 2353464 A (OGDEN) 28 February 2001 see abstract	1-11
Y	GB 2318280 A (WALDRON) 22 April 1998 see abstract	1-11
Y	US 6019111 A (GILLIES) 1 February 2000 see abstract	1-11

Information on patent family members

International application No.

PCT/AU2003/001406

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
US	4836702	AU	74456/91	EP	0485534
		US	4991314	US	5297739
				US	4928402
				WO	9118533
US	6280531				
US	4765354				
WO	9324337	AU	43382/93	GB	2281854
GB	2311210				
GB	2353464				
GB	2318280				
US	6019111				
END OF ANNEX					